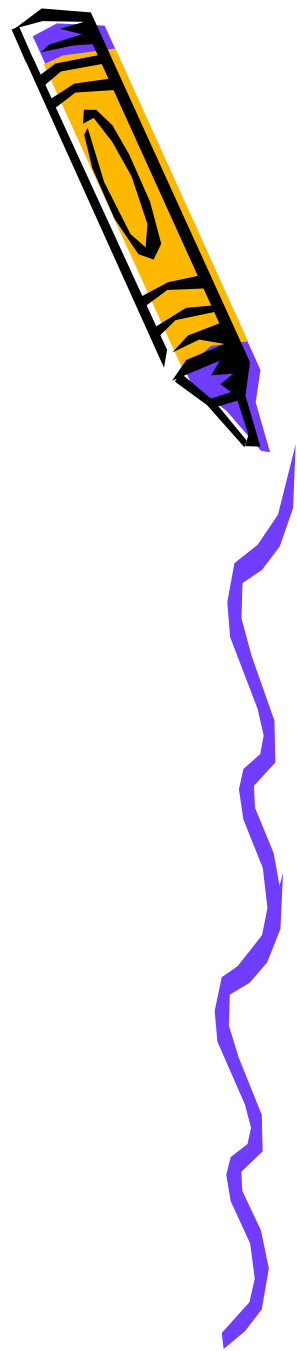


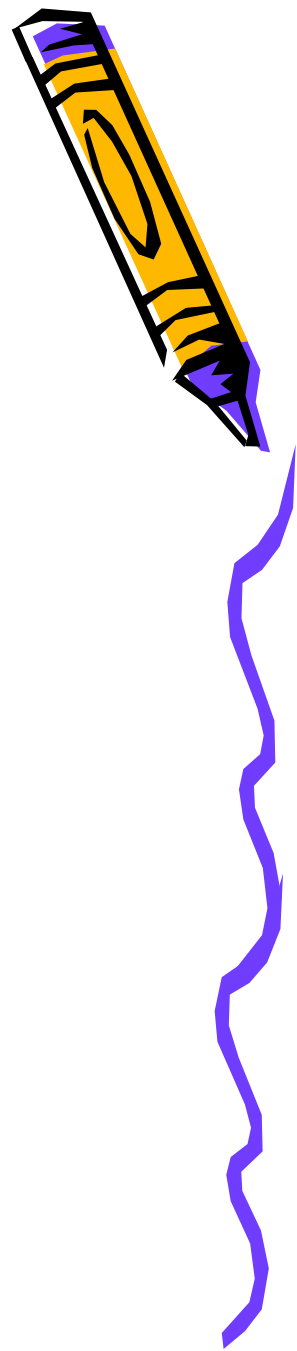
# Pediatric Obesity

- Findings
  - Cardiac
    - Normal
    - Hypertrophy
    - Decreased ventricular function
    - Complicating underlying CHD
  - Elevated total cholesterol
  - Elevated triglycerides
  - Elevated LDL
  - Low HDL



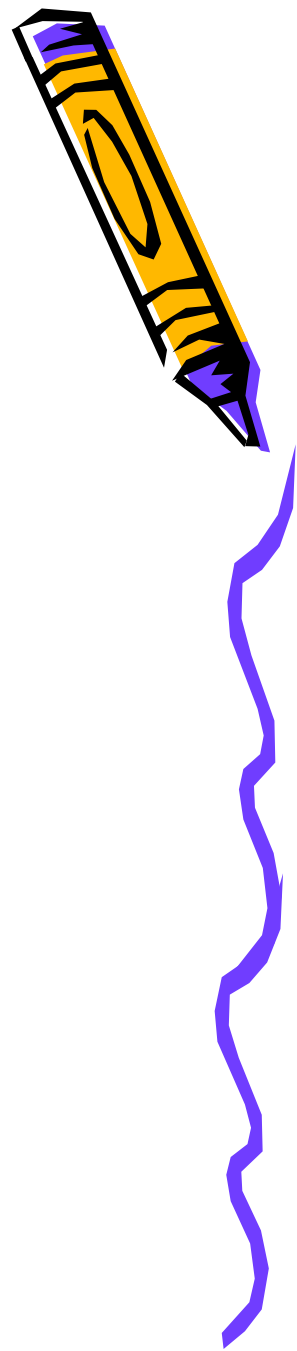
# Pediatric Obesity

- Interventions
  - Diet
  - Exercise
  - Education and empowerment
  - Referral
- Barriers
  - Family dynamics
  - Cost
  - Neighborhood resources
  - Support



# Pediatric Obesity

- Outcomes
  - Improvement/resolution
  - Ongoing obesity
  - Future issues as adults
  - Premature death
    - Cardiac failure
      - Primary
      - Secondary



# Medical Issues of Childhood Obesity



Dr. Karl Rathjen, M.D.



Dr. Jonathan Leffert, M.D.



Dr. Rick Snyder, M.D.



Dr. Lee Ann Pearse, M.D.



Client: American Academy of Orthopaedic Surgeons  
Title: Lazy Bones  
Length: 60  
ISCI: AAOS6003  
Expiration: 2014

Second Panel:  
Potential Solutions to  
Childhood Obesity



Dr. Sarah Barlow, M.D.,  
UT Southwestern Medical Center,  
Gastroenterology



Dr. Olga Gupta, M.D.,  
UT Southwestern Medical Center, Pediatrics



# Childhood Obesity Treatment: Research and Reality

Sarah E Barlow, MD, MPH

Olga T Gupta, MD

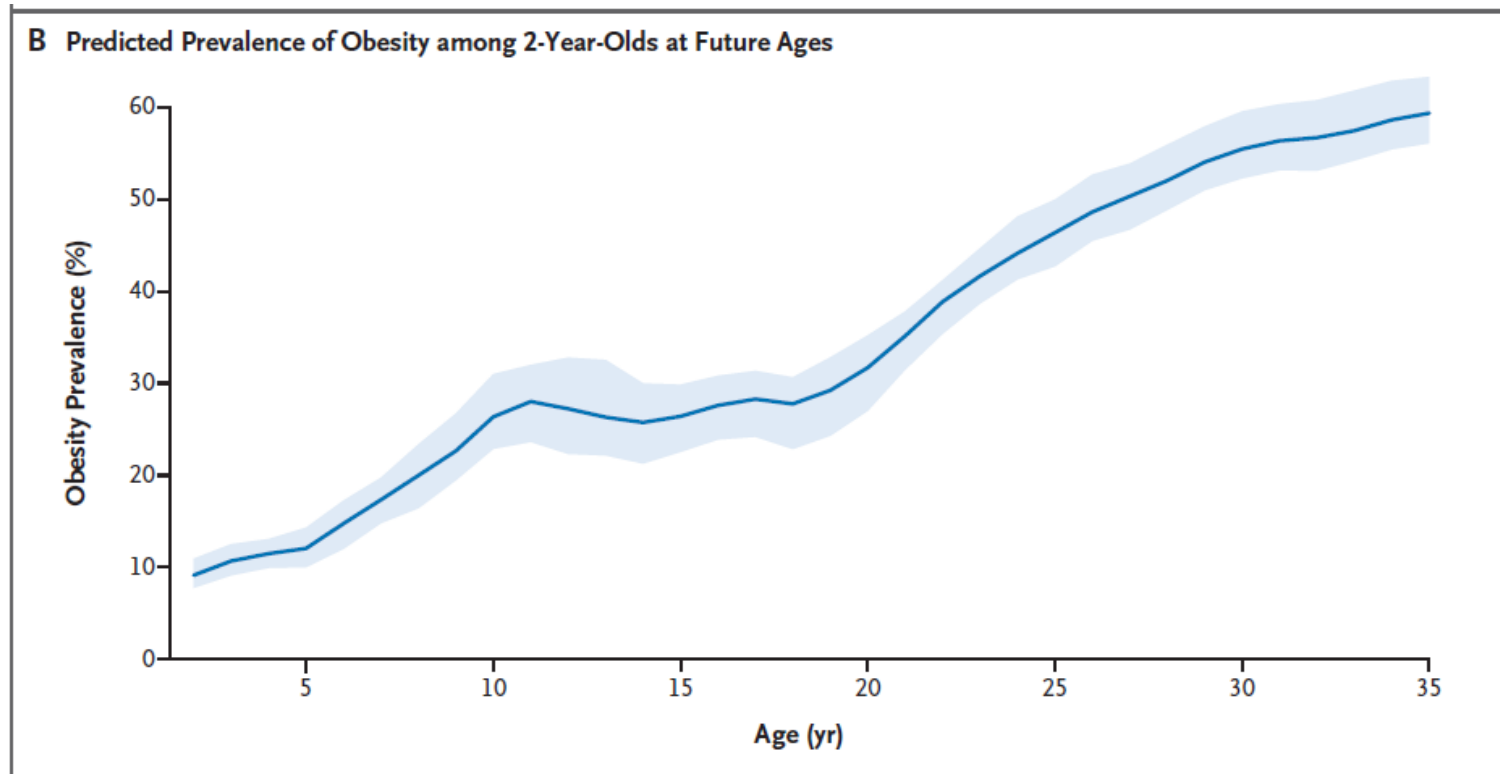
UT Southwestern Department of Pediatrics

April 5, 2018

# Adult obesity begins in childhood



# Prediction: most of today's 2 year olds will have obesity at age 35 years



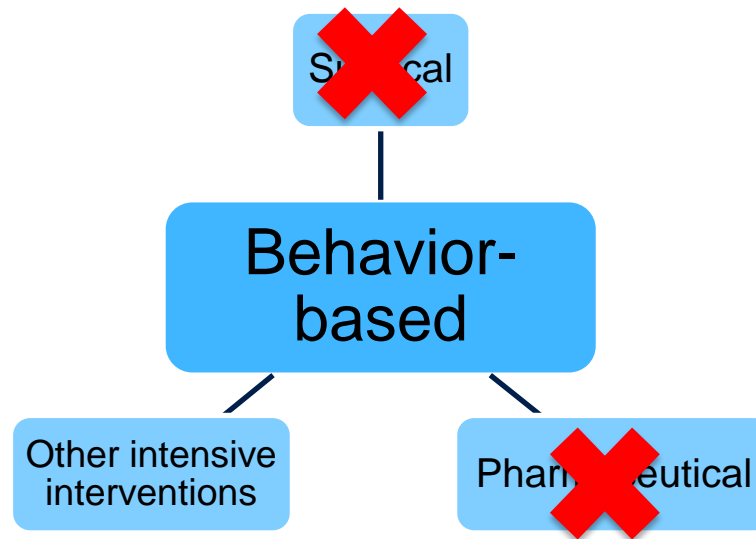
Ward E et al. 2017; NEJM 311:2145

# 10 year old girl comes to COACH program at Children's Health

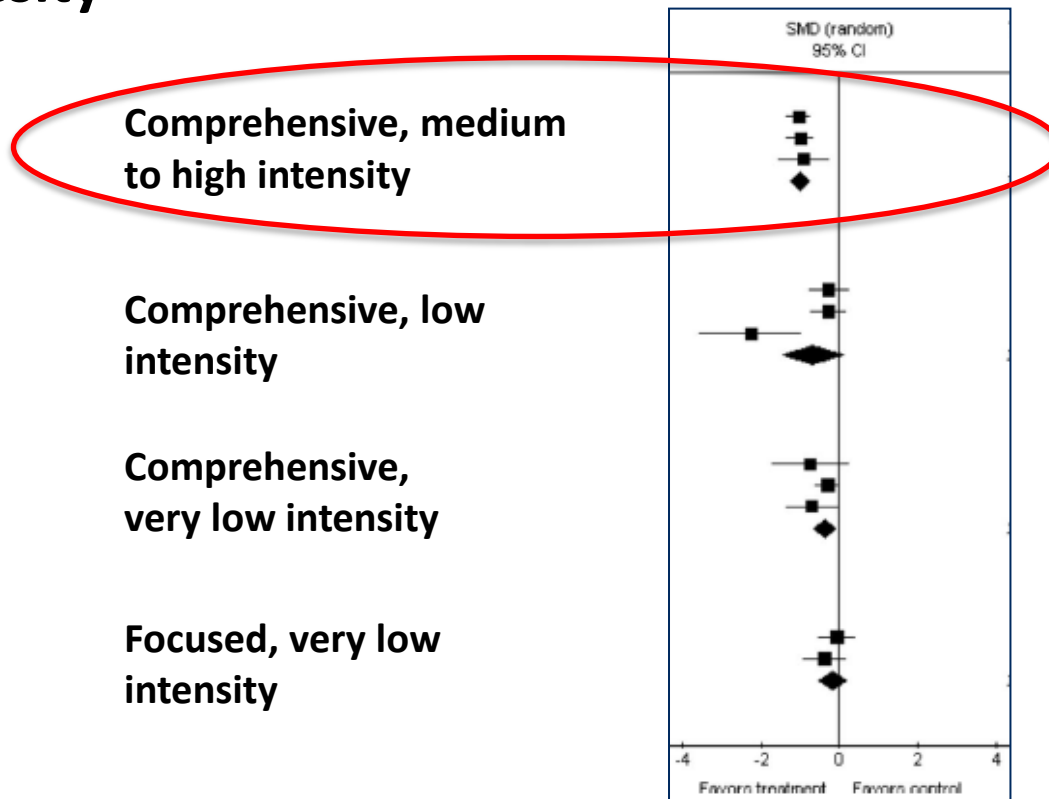


- Body Mass Index is in the Severe Obesity category
- Medical conditions:
  - Pre-diabetes
  - Fatty liver disease
  - Teasing and school avoidance
- Family
  - Father works in construction
  - Mother works in a fast food restaurant
  - Apartment with 3 siblings
  - Home after school under care of 14 year old sister: plays video games and snacks
- Neighborhood
  - Busy highway nearby, corner store but no grocery store, 2 miles from school

# Treatment strategies



# Evidence for comprehensive behavior-based programs for childhood obesity



Conclusion:

“...available research supports at least short term benefits of comprehensive **medium to high intensity** behavior interventions in obese children and adolescents”

= 25+ hours

Whitlock. Systematic Review for USPSTF *Pediatrics* 2010;125:e396

## Bright Bodies:

### 12 month program for 8 to 16 year olds

**Who:** 209 ethnically diverse and low income

Mean BMI 35 kg/m<sup>2</sup>

**What:** Randomized, controlled trial

Nutrition education, behavior modification, physical activity

Twice weekly for 6 months, then twice monthly for 6 months

#### Outcome:

12 month

Intervention - 1.6 kg/m<sup>2</sup>

Control + 1.7 kg/m<sup>2</sup>

Δ 3.3 kg/m<sup>2</sup>, ~8 kg, ~18 lb

24 months (43%)

Intervention - 0.9 kg/m<sup>2</sup>

Control + 1.9 kg/m<sup>2</sup>

Savoye *JAMA* 2007;297:2697; Savoye : *Pediatr* 2011; 3: 402

# What is keeping our patient from reaching that care

- Transportation
- Time off from work and school
- Recognition of problem
- Lack of insurance coverage
- After enrollment in a program only half of the participants return
  - Physical barriers (scheduling, parking location)
  - Perceived unsupportive clinic environment
  - Children most affected by obesity are at greatest risk of dropping out of treatment

Skelton J. 2011. *Obes Rev* 12:e273



# Children's Health Weight Management Support Programs

## 1. Medical Home Weight Management Visit

A focused overweight/obesity encounter at the PCP office ensures comprehensive assessment of weight severity, co-morbidity risk, behavioral health needs, and family motivation. After the initial visit, families can continue weight management visits with the PCP and/or use other programs. Whether or not patients use other programs, annual PCP visits are times to re-assess weight status, co-morbidities and motivation, all of which can change over time.

## 2. Nutrition Clinic Weight Management

Registered dietitians will provide nutrition assessment and counseling for a variety of obesity-related diagnoses. This clinic helps provide family support for healthy eating habits. Four sessions over 4-8 months, one-on-one, address healthy food choices and adopting a healthy lifestyle.

## 3. Get Up & Go

Children's Health offers "Get Up & Go" in partnership with the YMCA of Dallas. This 10-week weight management program is for children and their parents to attend once per week, 90 minutes each session. Designed by our physicians and registered dietitians to meet the needs of overweight, obese and/or pre-diabetes children, this age-appropriate program create awareness and understanding of how lifestyle choices affect health.

## 4. COACH (Center for Obesity and Its Consequences on Health)

A multidisciplinary clinic for children with complications from obesity or severe obesity. The team consists of physicians, advanced practice practitioners (NP or PA), registered dietitians, psychologists and social workers.

- Comprehensive assessment of medical co-morbidities and psychosocial screen
- Individualized nutrition and physical activity guidance
- Return visits are scheduled in 3-6 months, and more frequently when under evaluation for bariatric surgery or in other select situations.

## 5. Bariatric Surgery Program

Teens interested in weight loss surgery are evaluated by the bariatric team, led by a pediatric surgeon with extensive experience in adolescent weight loss surgery, alongside a registered dietitian, psychologist and PA.

**For questions, please call Provider Relations at 214-456-9933.**



Dr. David Teuscher, M.D.,  
U.S. Dept. of Health and Human Services,  
Regional Director / Orthopedics

# Improving the Health of the Nation through Science and Prevention



# HHS Led Initiatives

- **Overview**

- Healthy People 2020
- Dietary Guidelines for Americans
- Physical Activity Guidelines for Americans

# Healthy People Initiative



# What is Healthy People?

- Provides a strategic framework for a **national prevention agenda** that communicates a vision for improving health and achieving health equity
- Identifies science-based, **measurable objectives with targets** to be achieved by the end of the decade
- Requires tracking of **data-driven outcomes** to monitor progress and to motivate, guide, and focus action
- Offers model for **program planning** international, state, and local





# Healthy People Evolution

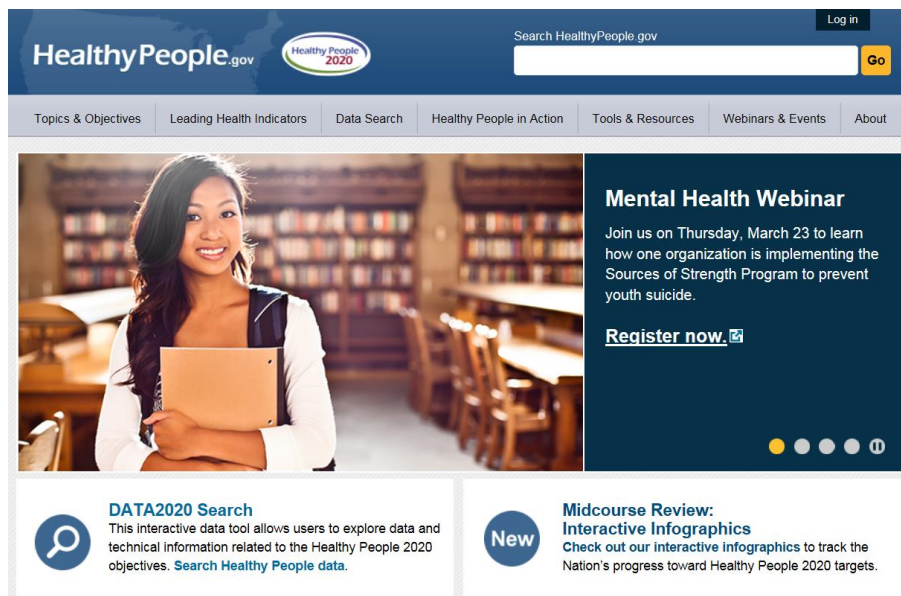
Target Year	1990	2000	2010	2020
<b>Overarching Goals</b>	<ul style="list-style-type: none"> <li>• Decrease mortality: infants–adults</li> <li>• Increase independence among older adults</li> </ul>	<ul style="list-style-type: none"> <li>• Increase span of healthy life</li> <li>• Reduce health disparities</li> <li>• Achieve access to preventive services for all</li> </ul>	<ul style="list-style-type: none"> <li>• Increase quality and years of healthy life</li> <li>• Eliminate health disparities</li> </ul>	<ul style="list-style-type: none"> <li>• Attain high-quality, longer lives free of preventable disease</li> <li>• Achieve health equity; eliminate disparities</li> <li>• Create social and physical environments that promote good health</li> <li>• Promote quality of life, healthy development, healthy behaviors across life stages</li> </ul>
<b>LHIs</b>			10 topics 22 Indicators	12 topics 26 indicators
<b>Topic Areas</b>	15	22	28	42
<b>Objectives</b>	226	319	~1,000	>1,200

# Purpose of Healthy People

- Assess the impact of disease prevention and health promotion activities
- Identify nationwide health improvement priorities
- Increase public awareness and understanding of the determinants of health, disease, and disability and opportunities for progress
- Provide measurable objectives and goals that are applicable at the national, state, and local levels
- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge
- Identify critical research, evaluation, and data collection needs



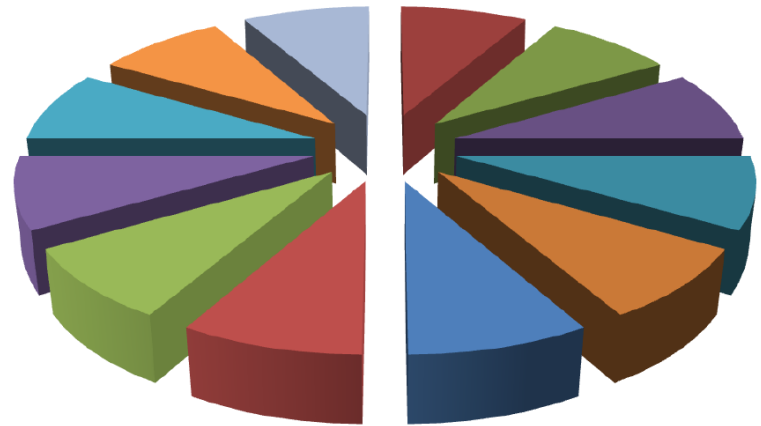
- 42 Topic Areas, including Nutrition and Weight Status and Physical Activity
- >1200 Science-Based Measurable Objectives
- Leading Health Indicators  
12 Topics supported by 26 Indicators
- Healthypeople.gov  
Highlights narratives, evidence-based resources, tools, data



# Leading Health Indicators

Leading Health Indicators are high-priority health issues and actions that can be taken to address them

- Access to Health Services
- Clinical Preventive Services
- Environmental Quality
- Injury and Violence
- Maternal, Infant, and Child Health
- Mental Health
- Nutrition, Physical Activity, and Obesity
- Oral Health
- Reproductive and Sexual Health
- Social Determinants
- Substance Abuse
- Tobacco



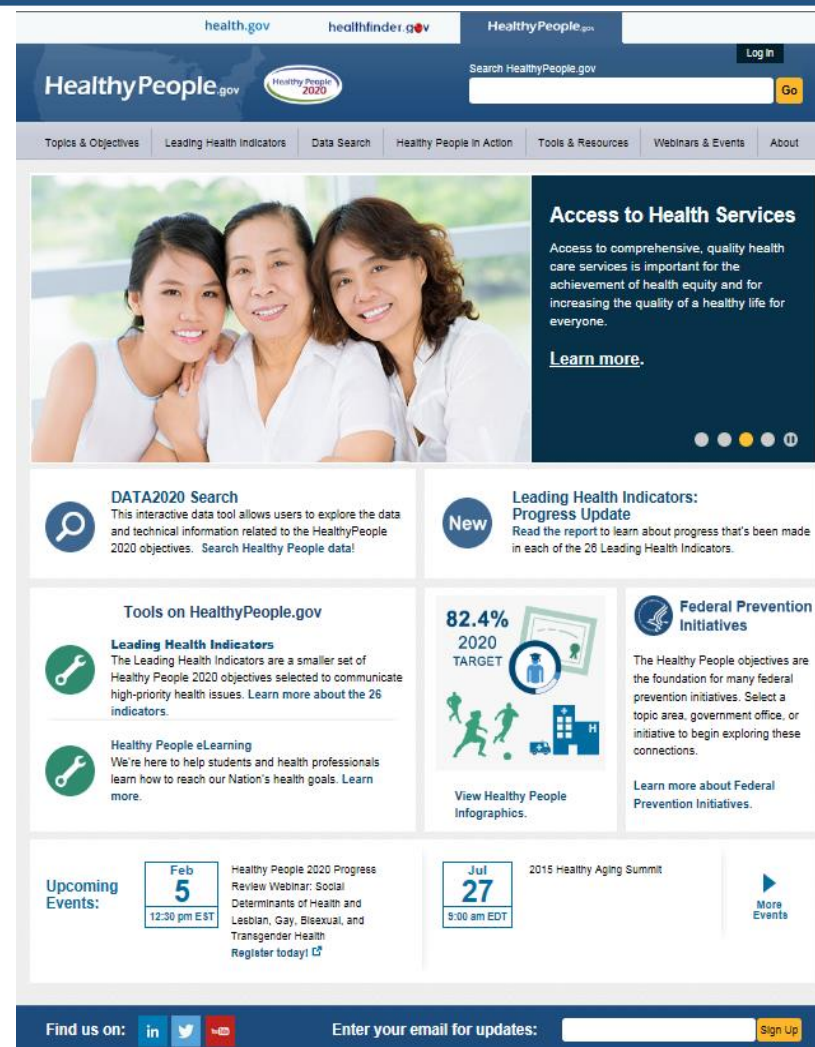
12 LHI Topics, 26 Indicators

# Measuring the Nation's Progress

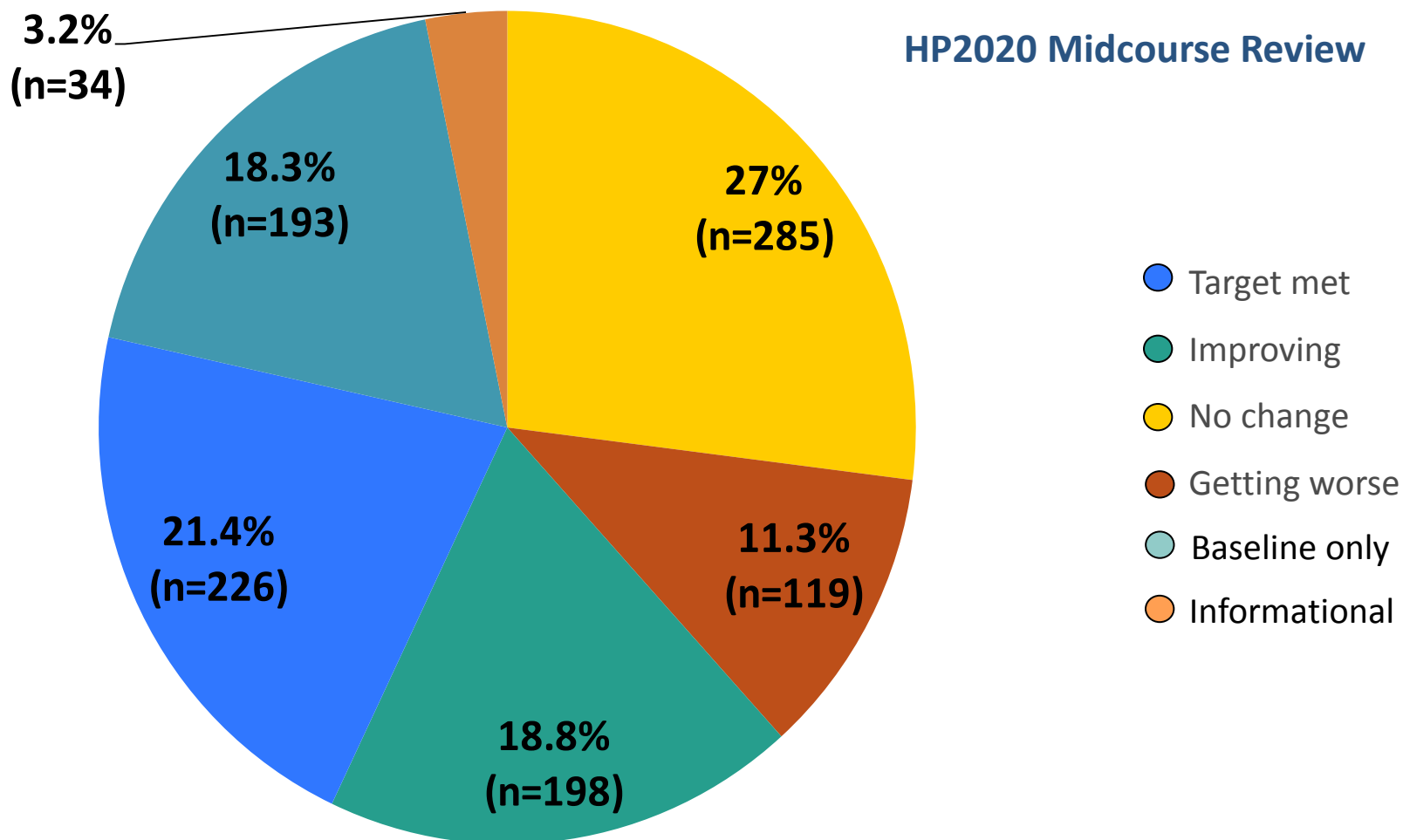
- **Topic Area Progress Reviews**
  - Webinars and working sessions
- **Who's Leading the Leading Health Indicators?**
  - Bimonthly webinars and monthly e-bulletins
- **Midcourse Review**
  - Mid-decade progress assessment of over 1200 objectives
- **Final Review**
  - End of decade progress assessment for all objectives

- Data tool for measuring program performance
- Framework for program planning and development
- Goal setting and agenda building
- Teaching public health courses
- Benchmarks to compare state and local data
- Way to develop nontraditional partnerships
- Model for other plans and countries
- Community health assessments
- Public health accreditation

- Objectives and Topic Area Narratives
- DATA2020: data, trend
- National Snapshots
- Evidence-based resources
- Infographics
- Sharing Library
- Midcourse Review
- Public comment database
- Content Syndication
- Twitter: @gohealthypeople



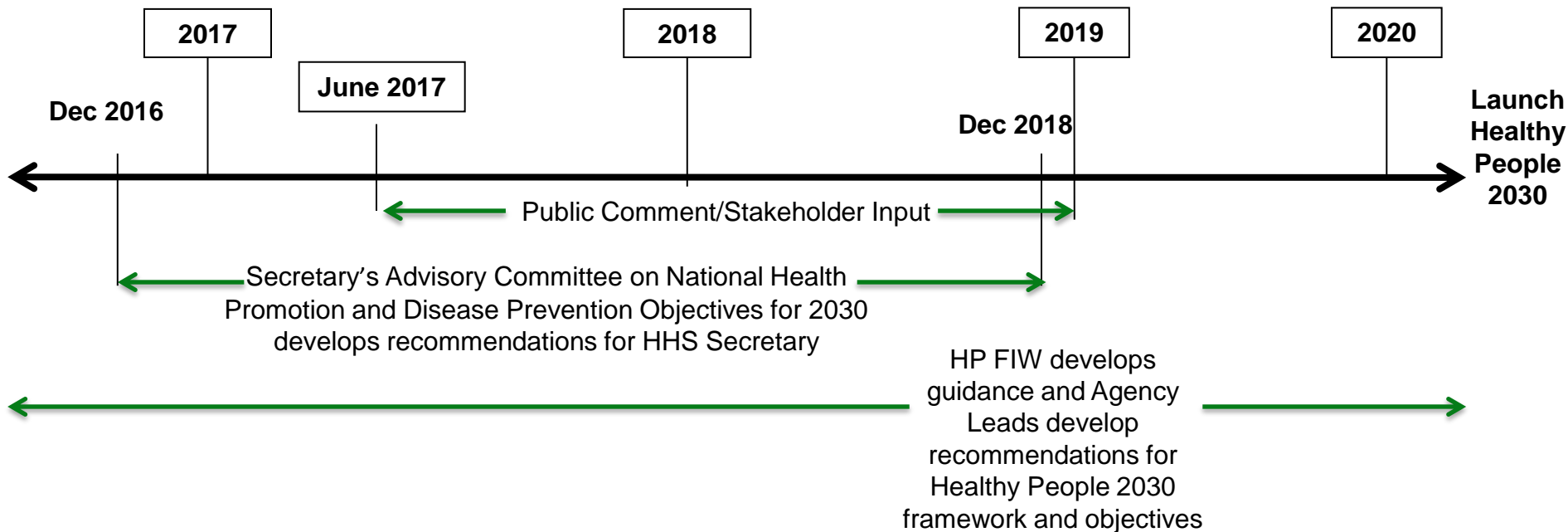
# Healthy People 2020 Progress



# Developing Healthy People 2030

## Phase I *Development of Framework*

## Phase II *Development of Objectives*

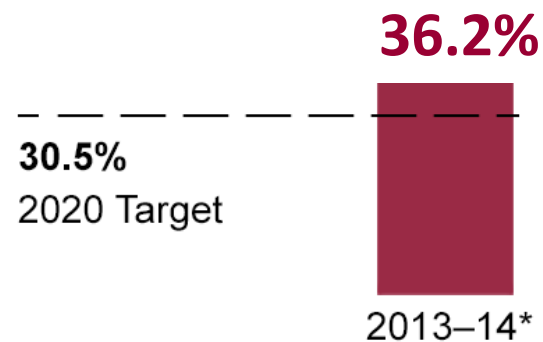


# Healthy People 2020 Obesity Targets

## Adult Obesity

In 2013-14, 36.2% of adults aged 20 years and over were obese (age adjusted).

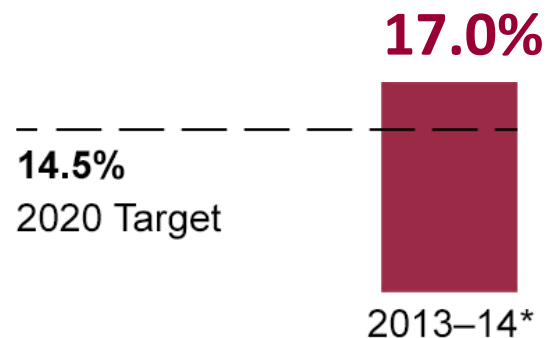
**Data source:** National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.



## Obesity in Children and Adolescents

In 2013-14, 17.0% of children and adolescents aged 2-19 years were considered obese

**Data source:** National Health and Nutrition Examination Survey (NHANES), CDC/NCHS.





# Dietary Guidelines for Americans



Office of Disease Prevention  
and Health Promotion

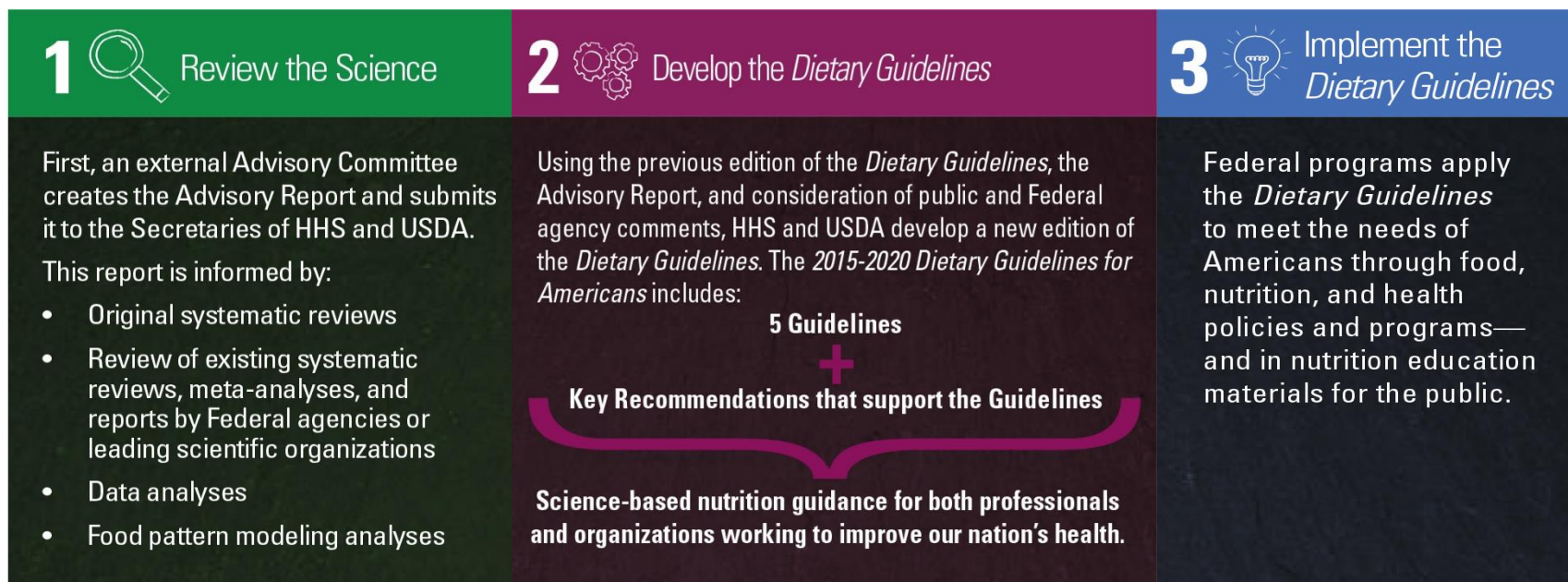
- Food-based recommendations
- Help promote health and prevent chronic disease
- For implementation through Federal nutrition and health programs
- For use by other health professionals and communities
  - To promote healthy food and physical activity choices and settings



***Updated every 5 years by USDA and HHS  
based on current scientific evidence on  
nutrition and health***

[DietaryGuidelines.gov](https://DietaryGuidelines.gov)

An overview, based on the 2015-2020 Dietary Guidelines process...



- 1. Follow a healthy eating pattern across the lifespan.** All food and beverage choices matter. Choose a healthy eating pattern at an appropriate calorie level to help achieve and maintain a healthy body weight, support nutrient adequacy, and reduce the risk of chronic disease.
- 2. Focus on variety, nutrient density, and amount.** To meet nutrient needs within calorie limits, choose a variety of nutrient-dense foods across and within all food groups in recommended amounts.
- 3. Limit calories from added sugars and saturated fats and reduce sodium intake.** Consume an eating pattern low in added sugars, saturated fats, and sodium. Cut back on foods and beverages higher in these components to amounts that fit within healthy eating patterns.
- 4. Shift to healthier food and beverage choices.** Choose nutrient-dense foods and beverages across and within all food groups in place of less healthy choices. Consider cultural and personal preferences to make these shifts easier to accomplish and maintain.
- 5. Support healthy eating patterns for all.** Everyone has a role in helping to create and support healthy eating patterns in multiple settings nationwide, from home to school to work to communities.

- Points out that high percentage of the population is overweight or obese
- Evidence base evaluates evidence on healthy eating patterns and overweight and obesity
  - Moderate evidence that healthy eating patterns are associated with a reduced risk of overweight and obesity
- Encourages adequate physical activity
  - Help maintain a healthy weight, prevent excessive weight gain, and lose weight when combined with a healthy eating pattern lower in calories
- Promotes strategies to create and support healthy eating habits, including those that impact weight-related outcomes

# Physical Activity Guidelines for Americans



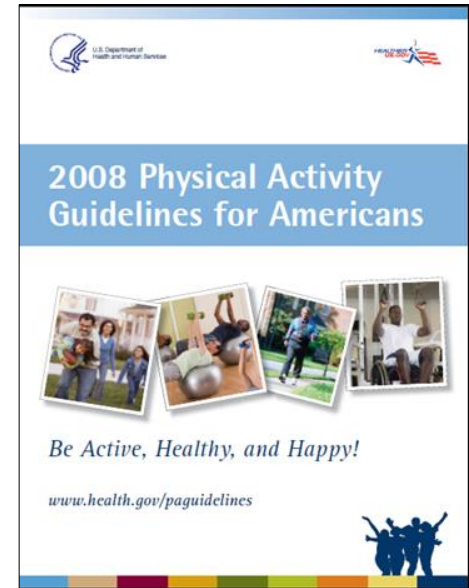
Office of Disease Prevention  
and Health Promotion



# What are the *Physical Activity Guidelines for Americans*?

Physical Activity  
Guidelines for  
Americans

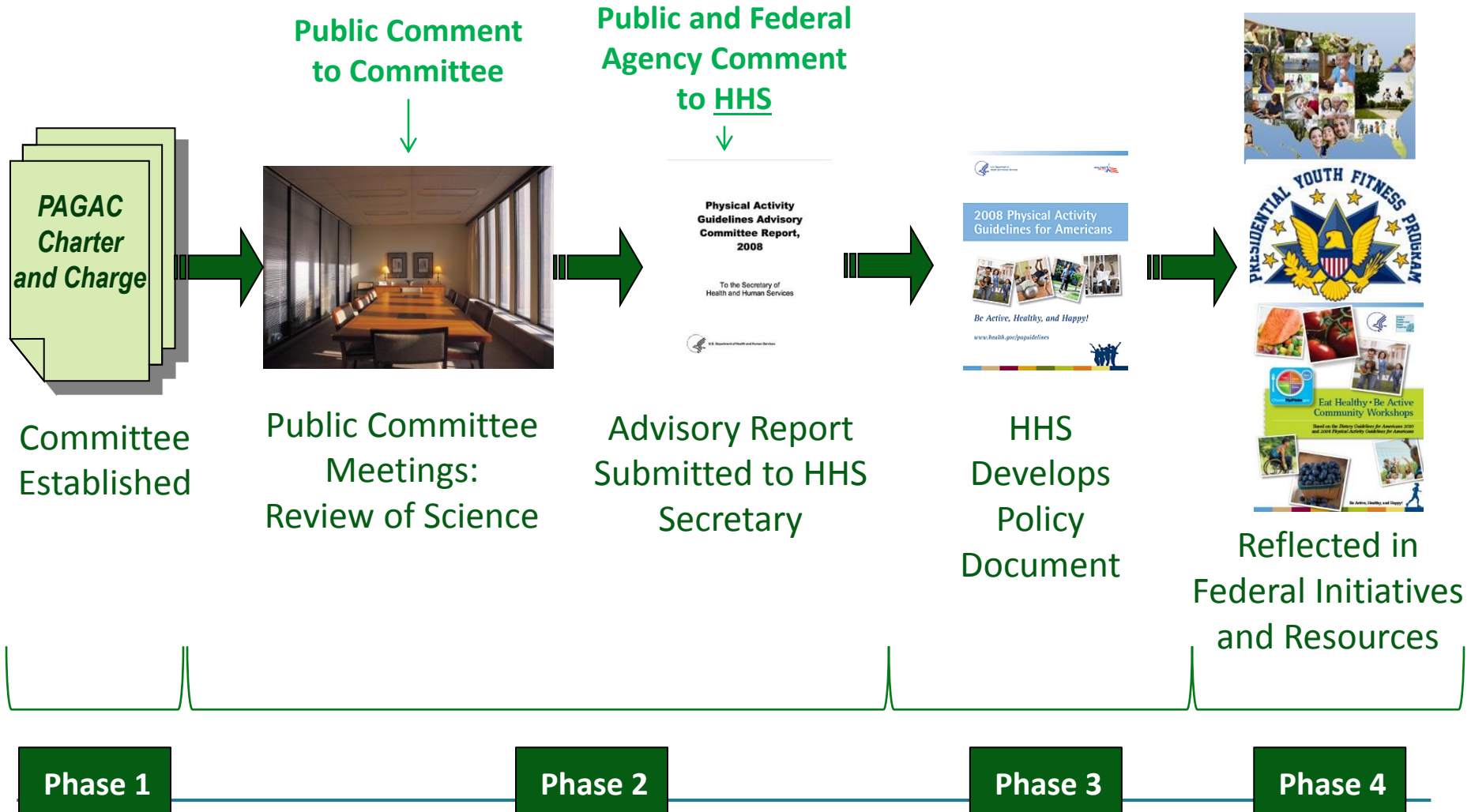
- First comprehensive federal guidance on physical activity
- Based on an extensive review of the scientific literature on the amount and types of physical activity that lead to health benefits
- First released in 2008 with second edition anticipated to be released in 2018
- HHS product led by the Office of Disease Prevention and Health Promotion (ODPHP) in coordination with Centers for Disease Control and Prevention (CDC), National Institutes of Health (NIH), and President's Council on Sports, Fitness & Nutrition (PCSFN)



Office of Disease Prevention  
and Health Promotion

# Physical Activity Guidelines Development and Implementation

Physical Activity  
Guidelines for  
Americans



Office of Disease Prevention  
and Health Promotion



- Guidance for all Americans, ages 6 and over:
  - Children and adolescents
  - Healthy adults and older adults
  - Women during pregnancy and the postpartum period
  - People with disabilities and chronic conditions
- Regular physical activity reduces the risk of many adverse health outcomes
- Some physical activity is better than none
- For most health outcomes, additional benefits occur as the amount of physical activity increases through higher intensity, greater frequency, and/ or longer duration

# Scientific Evidence Shows Regular Physical Activity leads to...

Physical Activity  
Guidelines for  
Americans

- Improved cardiorespiratory and muscular fitness
- Prevention of falls
- Reduced depression
- Better cognitive function (for older adults)
- Better functional health (older adults)
- Increased bone density
- Improved sleep quality
- **Prevention of weight gain**
- **Weight loss**
- **Reduced abdominal obesity**
- **Weight maintenance after weight loss**
- Lower risk of:
  - Early death
  - Coronary heart disease
  - Stroke
  - Hypertension
  - Adverse blood lipid profile
  - Type 2 diabetes
  - Colon cancer
  - Breast cancer
  - Lung cancer
  - Endometrial cancer
  - Hip fracture

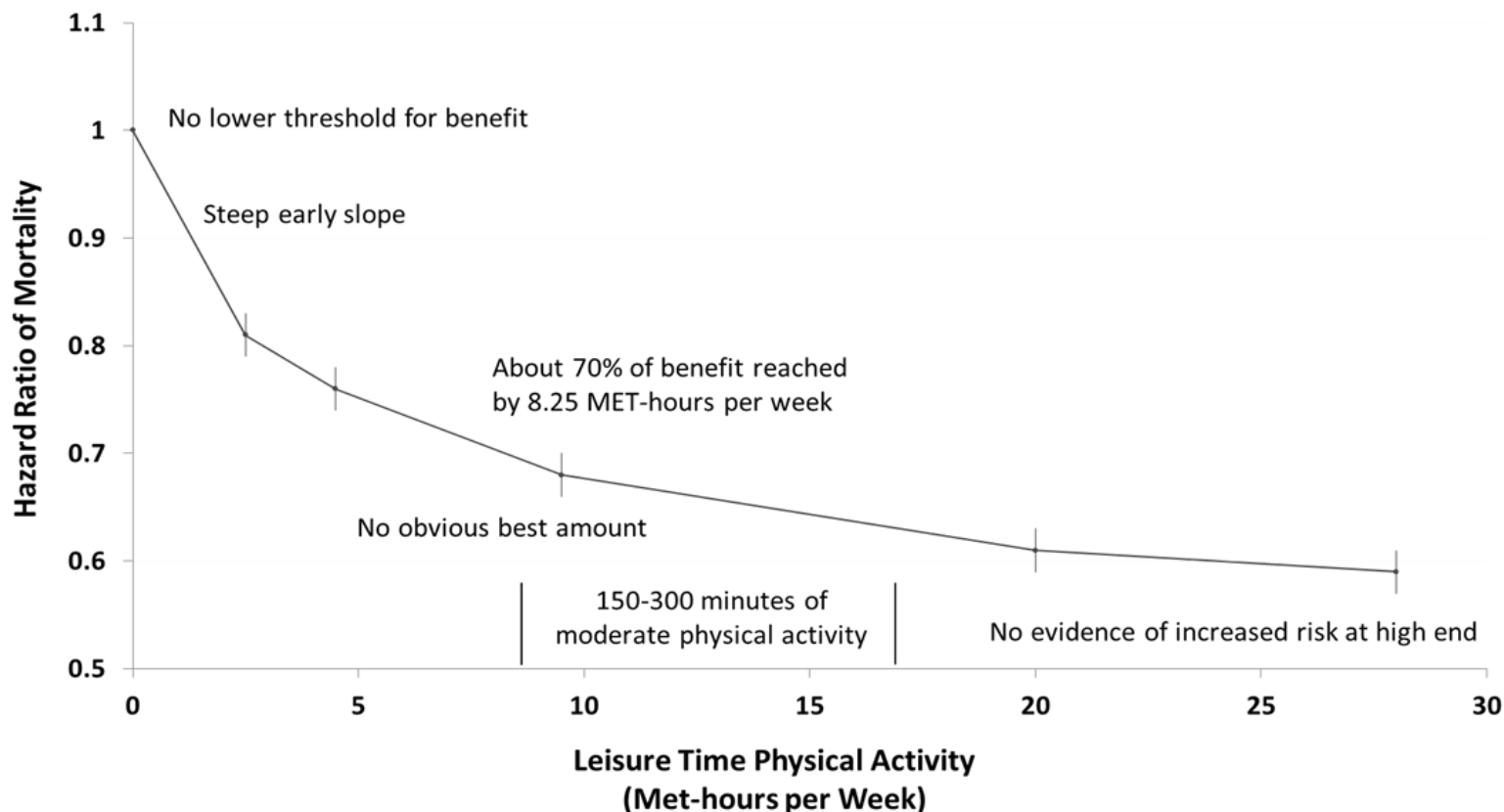
Moderate or strong evidence as listed in the *2008 Physical Activity Guidelines for Americans*



Office of Disease Prevention  
and Health Promotion

# Relationships of Moderate-to-Vigorous Physical Activity to All-Cause Mortality, with Highlighted Characteristics Common to Studies of This Type

Physical Activity  
Guidelines for  
Americans



**2 hours and 30 minutes or more of  
physical activity each week**

## **Aerobic**

At least:

- 150 minutes (2.5 hours) a week of moderate-intensity aerobic activity
- OR
- 75 minutes of vigorous-intensity aerobic activity
- OR
- An equivalent combination of the two

## **Muscle-strengthening**

- Two or more days a week



**60 minutes (1 hour) or more of physical activity daily**

- Aerobic
- Muscle-strengthening
- Bone-strengthening

*Activities should be age-appropriate, enjoyable, and varied*

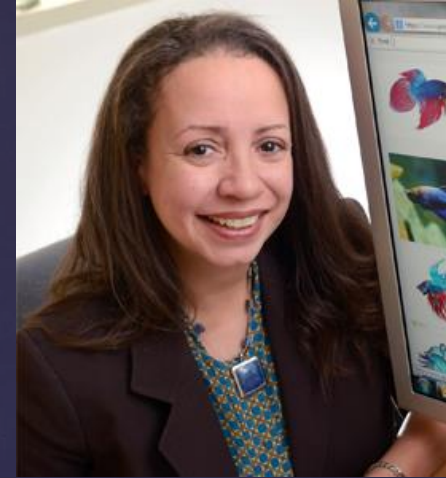


[www.health.gov/paguidelines](http://www.health.gov/paguidelines)

# Potential Solutions for Childhood Obesity



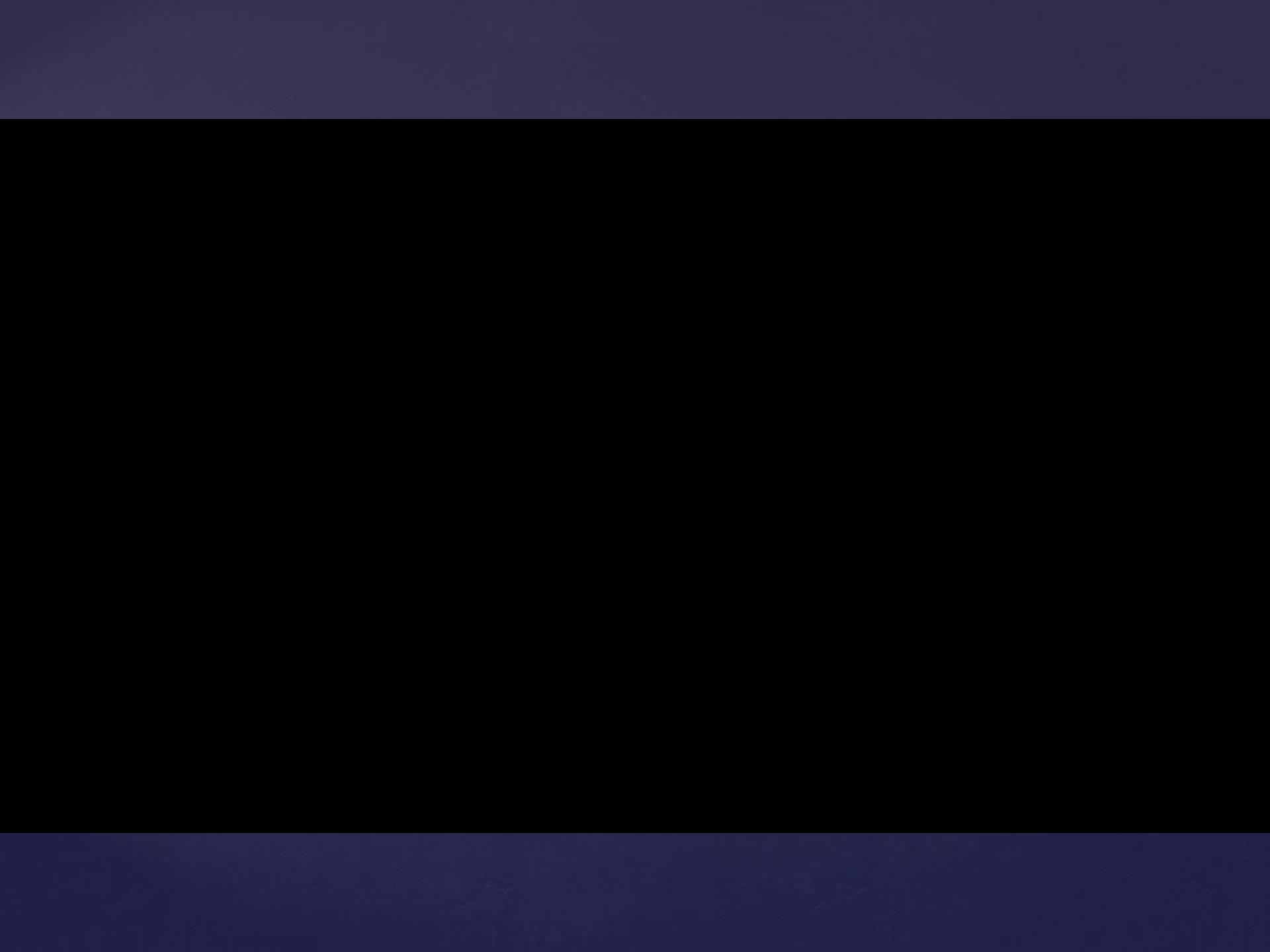
Dr. Sarah Barlow, M.D.



Dr. Olga Gupta, M.D.



Dr. David Teuscher, M.D.





# Closing Remarks by Congressman Pete Sessions



Please provide any  
comments  
to

[Sessions.Healthcare@mail.house.gov](mailto:Sessions.Healthcare@mail.house.gov)